

Spectrum of Chronic Kidney Disease in the Elderly and Factors Governing In-Hospital Mortality in a Tertiary Care Hospital in India

Sandeep Mahajan, Rajshree Ramasethu, Dipankar Bhowmik and Suresh C Tiwari

Department of Nephrology, All India Institute of Medical Sciences, Ansari Nagar, New Delhi-110029, India.

Abstract

With increasing geriatric population in India more number of elderly patients with chronic kidney disease (CKD) are now requiring hospitalization and renal replacement therapy (RRT). However, no study has specifically looked at the etiology of CKD and factors determining in-hospital mortality among these patients. Identifying these factors can help in planning strategies for management of these cases and a more rational use of expensive therapeutic modalities. We retrospectively analyzed data of 158 patients aged \geq 60 years admitted with CKD in a tertiary care super-specialty hospital in North India from July 2003 - December 2004. Data regarding their demographic profile, renal diagnosis, associated co-morbidities, requirement and type of RRT given were retrieved. The study parameters between survivors and non-survivors were analyzed by univariate and multivariate analysis. Type of RRT opted for by the patient at discharge was also noted. Average age of study population was 67.09 years (60-88 years) with 69% being males. Diabetic nephropathy was the commonest cause accounting for 41.8% cases followed by hypertensive nephrosclerosis (24.1%) and obstructive nephropathy (16.3%). 21 patients (13%) had acute on chronic renal failure with volume depletion being the most common acute insult followed by infection. 77.7% patients required RRT at admission due to uremic complications. Acute peritoneal dialysis was the most frequent initial dialysis given (62%). Only 18 (14.5%) patients had a prior follow-up with a nephrologist of \geq 3 months and only 10 had an arteriovenous fistula. 60.8% had one or more comorbidity with infection and cardiovascular disease being most common while 17.6% patients were requiring inotropic/ventilatory support. We had an in-hospital mortality of 22.2%. On univariate analysis age \geq 80 years, diabetic nephropathy, late referral, presence of infection, need for inotropic/ventilatory support and need for RRT were found to be significantly associated with increased mortality. On multivariate analysis however, only diabetic nephropathy and need for inotropic/ventilatory support were found to be significant. Of the 78 patients who were discharged requiring long-term dialysis, 42 (53.7%) opted out of RRT due to financial constraints and lack of social support. To conclude, diabetic nephropathy is the commonest cause of CKD among our hospitalized elderly patients. Most of our patients present to referral hospital in advanced azotemia and with significant co-morbidities. They have a high in-hospital mortality that correlates with presence of diabetic nephropathy and cardiovascular or respiratory failure.

Keywords : Geriatric patients, developing world, late referral, organ failure, CKD